



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

Site: Maline Creek
ID # MOD980631162
Break: 2.4
Other: 8-12-93

AUG 12 1993

MEMORANDUM

SUBJECT: Former CertainTeed Transite Plant, St. Louis, Missouri,
Site Asbestos Evaluation, 7/19/93 (SBR23)

FROM: Paul E. Beatty *Paul E. Beatty*
Environmental Engineer, AMON/EMCM/ENSV

TO: Ronald D. McCutcheon
Branch Chief, EP&R/ENSV

THRU: Joe Arello *JA*
Chief, Air Monitoring Section, EMCM/ENSV

At the request of the Emergency Planning and Response Branch, Field Removal Section, the Air Monitoring Section conducted an inspection at the retired CertainTeed transite manufacturing facility in St. Louis, Missouri. The purpose of the inspection was to reinspect the site after an asbestos abatement project and to determine the site status during the flooding of Maline creek.

The inspection was performed on July 19, 1993, beginning at 9:00 p.m. I was accompanied on the inspection by Don Hamera of the Emergency Planning and Response Branch, Field Removal Section and Bruce Woods, Jr. of the Air Monitoring Section.

Upon arrival at the site, we spoke with Mark Kootman of the Branch Metal Co., who represented the property owner, PG Investments. He was informed of the purpose of the inspection and conducted a tour of the buildings.

Mr. Kootman said that the pipe insulation in the southwest building had been removed and the insulation debris in the northeast building had been cleaned up. The abatement was performed by Environmental Control & Abatement, Inc. and Corvera Abatement Technologies, Inc. The NESHAP notification of the abatement project is attached (Attachment 1). The abatement project has been completed.

For additional site and sample information, please see the attached Site Diagram (Attachment 2), Sample Summary Sheet (Attachment 3), Chain of Custody Sheet (Attachment 4) and Sample Analysis (Attachment 5). Photographs (Attachment 6) were obtained of the sample sites and the areas inspected. The photographic negatives are attached to the original report.

I proceeded with the inspection of the facility site. The northeast building currently houses the Branch Metals Company. The southwest building is mostly empty, except for a trucking company in the north end.

The Southwest Building

All of the pipe insulation in the southwest building was supposedly removed during the recent abatement project (Photo #4 and #5). All of the previously insulated pipes appeared to be adequately cleaned. Insulation debris on the ground, identified during previous inspections, had also been cleaned up. Mr. Kootman said that the abatement workers put up plastic containment walls and wet the insulation during the removal.

The insulation on the process heater had also been removed (Photo #6). There was some insulation residue left on the equipment, and some insulation residue on a pipe next to the equipment (Photo #7).

The asbestos in the tank on the second level was still present.

Two conical vessels located on the third level are covered with a gray cementitious material which was sampled (Sample site SBR23-004) (Photos #22, #23 and #24). Polarized light microscopy (PLM) analysis showed that the sample contained no asbestos fibers.

Some possible ACM was also located on a vertical metal support on the ground floor. The material is gray, friable and fibrous (Photo #25).

West of the southwest warehouse, in the covered storage area, are some large mixing vessels. The ACM located on the vessels, especially around the inlets and outlets, is still present, undisturbed from the last inspection.

The Northeast Building

The northeast building is currently used by the Branch Metal Co. to store scrap metal. In the southeast end of the building there is a three story section adjacent to the southeast end wall which will be referred to as "area A". The adjoining room to the northwest of area A will be referred to as "area B", and the room northwest of area B will be referred to as "area C".

It appeared that the majority of the bulk ACM located in the southwest building has been cleaned-up. There is still general dust and some debris that could contain asbestos, but the areas of gross contamination appear to have been cleaned adequately (Photos #8 and #9). The insulated pipes in the northeast building, area C have been abated (Photo #13).

The floors on the 2nd and 3rd levels have been cleaned but some dust and debris remains (Photos #10, #11 and #12).

The outside area on the southeast end of the building has more transite debris visible on the surface than observed during the last inspection of 1/28/93 (Photos #14-#21). The contaminated area covers at least 5,000 square feet. Sample site SBR23-001 was obtained from a large area of transite pieces. Polarized light microscopy (PLM) analysis showed that the sample contained 5% chrysotile asbestos. The pieces of transite in the area are deteriorating. Some are crumbling and are covered with powder.

Also located in the southeast area, there appears to be cementitious debris similar to that located by the Maline creek. Sample site SBR23-002 was obtained from this friable material and polarized light microscopy (PLM) analysis showed that the sample contained 30% chrysotile asbestos.

Some insulation-type debris was also observed in the southeast area. The material was sampled (Sample site SBR23-003) and polarized light microscopy (PLM) analysis showed that the sample contained 35% chrysotile asbestos.

Maline Creek

As seen in Photos #1, #2, #3, #26 and #27, Maline creek has left its banks, and has flooded some yards and part of the CertainTeed site. The creek bank containing the transite waste layer was covered with water and not visible.

Summary

Asbestos abatement has taken place at the northeast and southwest buildings. The insulated pipes and gross contamination appeared to be adequately cleaned. Some dust and small debris are visible in the northeast building.

ACM is still on the southwest building mixing vessel, the mixers west of the southwest building and the boiler house.

The outside area, southeast of the northeast building is covered with a large amount of various ACM debris, which includes transite, insulation and transite waste material.

Attachments

1. NESHAP Notification, 2 pages.
2. Site Diagram, 2 pages.
3. Sample Summary Sheet, 1 page.
4. Chain of Custody Sheet, 1 page.
5. Sample Analysis, 5 pages.
6. Photographs, 9 pages.

cc: Alice Law, ARCP/ARBR/ARTX

ATTACHMENT 1

FAXED

3/16/93

To Gonzalo

ASBESTOS NESHAP (40 CFR PART 61)

NOTIFICATION OF DEMOLITION AND RENOVATION

| | | | | | |
|--|--|--------------------------|--|---------------------------------------|------------------------------------|
| Operator Project # | | Postmark | Date Received | Notification # | |
| I. TYPE OF NOTIFICATION (O-Original R-Revised C-Canceled): <u>O</u> | | | | | |
| II. FACILITY INFORMATION (Identify Owner, Removal Contractor, and other operator) | | | | | |
| OWNER NAME: <u>Branch Metals Processing</u> | | | | | |
| Address: <u>620 St. Clair Road</u> | | | | | |
| City: <u>St. Louis</u> | | State: <u>Mo.</u> | | Zip: <u>63137</u> | |
| Contact: <u>Onese Kortman</u> | | | | Tel: <u>314-867-7500</u> | |
| REMOVAL CONTRACTOR: <u>Environmental Control & Abatement, Inc.</u> | | | | MO DNR #89-7-0062 IL EPA #0039 | |
| Address: <u>PO Box 2038 (413 Fee Fee Road)</u> | | | | On Site Contact: | |
| City: <u>Maryland Heights</u> | | State: <u>MO</u> | | Zip: <u>63043</u> | |
| Contact: <u>William A. Lemire</u> | | | | Tel: <u>291-3440 Office</u> | |
| OTHER OPERATOR: <u>Corvera Abatement Technologies, Inc.</u> | | | | | |
| Address: <u>1501 Oak Glen Dr.</u> | | | | | |
| City: <u>St. Louis</u> | | State: <u>Mo.</u> | | Zip: <u>63026</u> | |
| Contact: <u>Gonzalo Corvera</u> | | | | Tel: <u>314-225-2131</u> | |
| III. TYPE OF OPERATION (D-Demo O-Ordered Demo R-Renovation E-Emer. Renovation): <u>R</u> | | | | | |
| IV. IS ASBESTOS PRESENT? (Yes/No): <u>Yes</u> | | | | | |
| V. FACILITY DESCRIPTION: (Include building name, number and floor or room number) | | | | | |
| Bldg Name: <u>Branch Metals Processing</u> | | | | | |
| Address: <u>620 St. Clair Road</u> | | | | | |
| City: <u>St. Louis</u> | | County: <u>St. Louis</u> | | State: <u>Mo</u> Zip: <u>63137</u> | |
| Site Location: <u>Same</u> | | | | | |
| Building Size: <u>250,000 Sq. ft</u> | | # of Floors: <u>3</u> | | Age in Years: <u>53</u> | |
| Present Use: <u>Metal recycling</u> | | | | Prior Use: <u>asbestos pipe manu.</u> | |
| VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL: <u>Replicate samples of suspect building materials bulk sampling analysis. Lab results attached.</u> | | | | | |
| VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING: 1. Regulated ACM to be Removed 2. Category I ACM Not Removed 3. Category II ACM Not Removed | | RACH To Be Removed | Nonfriable Asbestos Material Not to Be Removed | | Indicate Unit of Measurement Below |
| | | | Cat I | Cat II | Unit |
| Pipes | | <u>100 Lf.</u> | | | Ln Ft: <u>X</u> Ln M: |
| Surface Area <u>ACM Debris</u> | | <u>21,900 Sq. ft.</u> | | | Sq Ft: <u>X</u> Sq M: |
| Vol RACH Off Facility Component | | | | | Cu Ft: Cu M: |
| VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: <u>3/29/93</u> Complete: <u>4/16/93</u> | | | | | |
| SCHEDULED TIMES ASBESTOS REMOVAL: Start: <u>7:00 a.m.</u> Complete: <u>3:30 p.m.</u> | | | | | |
| IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: Complete: | | | | | |

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE: Total containment, full asbestos removal procedures, engineering controls, negative air, decontamination, total personal protective equipment, air monitoring.

XII. WASTE TRANSPORTER #1: *Contractor: Services #405783*

Name:

Address: *63 South Laclede Station Road*

City: *St Louis*

State: *Mo*

Zip: *63119*

Contact Person:

Tel:

WASTE TRANSPORTER #2

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

XIII. WASTE DISPOSAL SITE

Name: *Kitchfield/Hillsboro Landfill*

Location: *East Route 16, P.O. Box 97*

City: *Kitchfield*

State: *Illinois*

Zip: *62056*

Telephone:

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:

Name:

Title:

Authority:

Date of Order (MM/DD/YY):

Date Ordered to Begin (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS

Date and hour of Emergency (MM/DD/YY):

Description of the Sudden, Unexpected Event:

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:

XVI. DESCRIPTION OF PROCEDURE TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER. See XI above.

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS (Required 1 year after promulgation).

Wm A. Kinnure
(Signature of Owner/Operator)

3/9/93
(Date)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

Wm A. Kinnure
(Signature of Owner/Operator)

3/9/93
(Date)

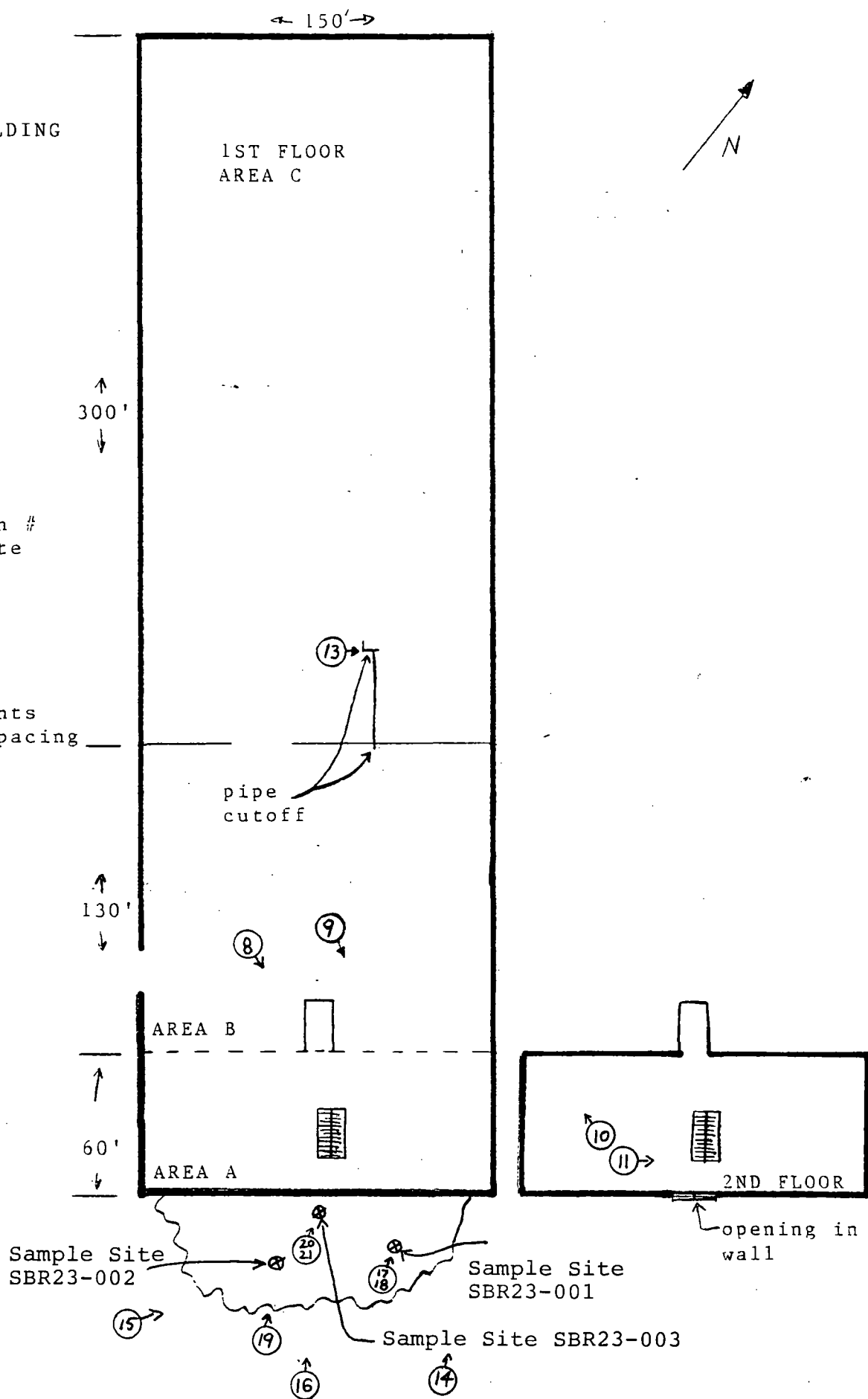
ATTACHMENT 2

CERTAINTEED
ST. LOUIS, MO
NORTHEAST BUILDING
7/19/93
SBR23

LEGEND

- ⊕ - photograph #
⊗ - Sample Site

-Not to scale
-All measurements
estimated by pacing

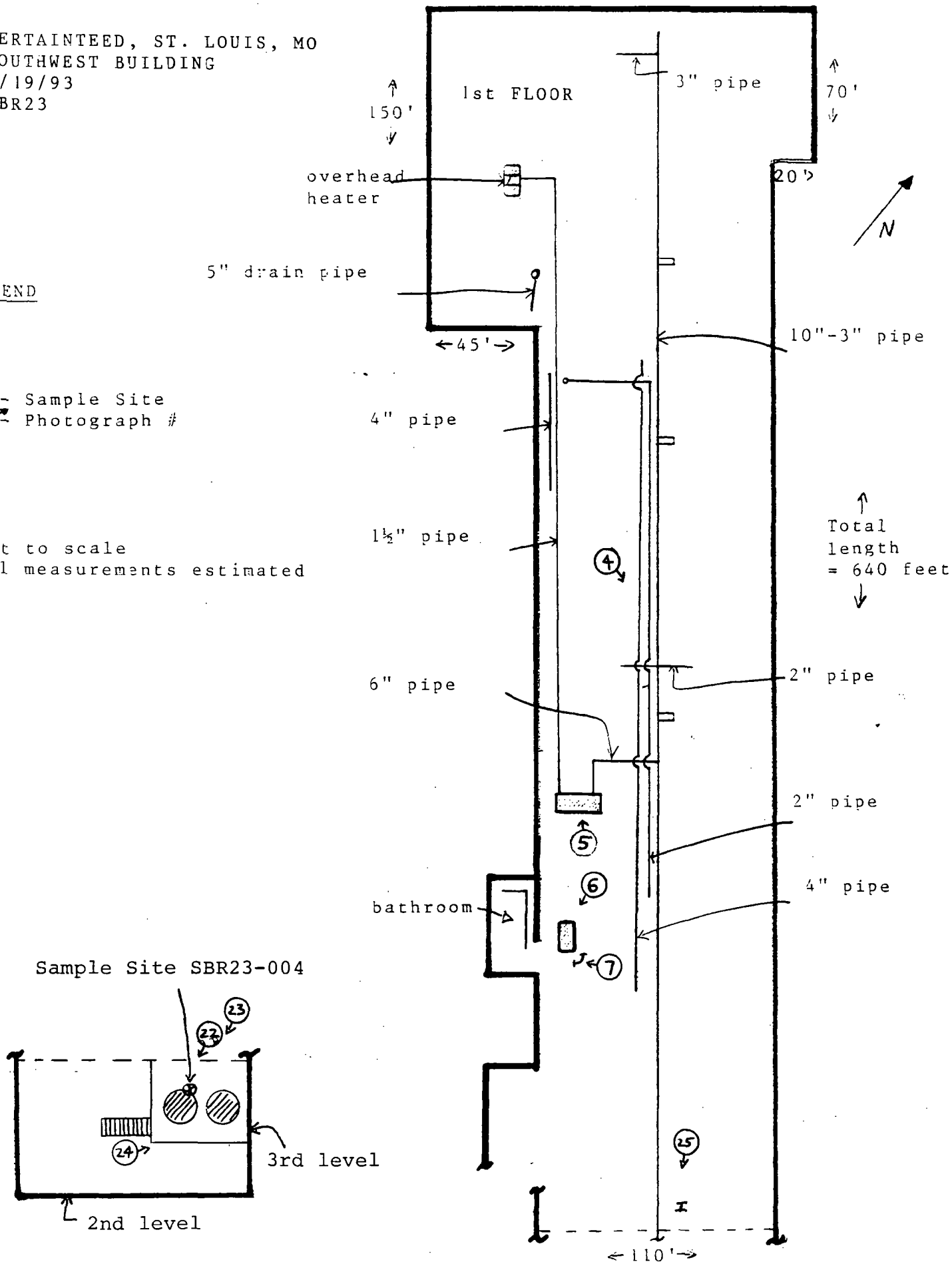


CERTAINTEED, ST. LOUIS, MO
 SOUTHWEST BUILDING
 7/19/93
 SBR23

LEGEND

- ⊗ - Sample Site
- ⊕ - Photograph #

-Not to scale
 -All measurements estimated



ATTACHMENT 3

SAMPLE SUMMARY SHEET

Facility: CertainTeed

Address: St. Cyr Street, St. Louis, MO

Sampled by: Paul E. Beatty

Agency: U.S. EPA, Region VII

Date: 7/19/93 Activity #: SBR23

| Sample# | Sample Site * (see site map) | Sample Description | Quantity of ACM | Analysis Results | Photo # |
|-----------|---|---|--------------------|--------------------------|------------|
| SBR23-001 | SE of NE building. | Transite-deteriorated. Light gray, friable/dusty. | - | Chrysotile, 5% | 17,18 |
| SBR23-002 | SE of NE building. | Gray, cementious, friable. & White, friable, fibrous. | - | Chrysotile, 30% | 19 |
| SBR23-003 | SE of NE building. | Gray, friable, fibrous. | - | Chrysotile, 35% | 20,21 |
| SBR23-004 | SW building. 3rd floor. SW conical tank. | Gray, slightly friable, granular, cementious. | - | No asbestos detected. | 22,23 |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |
| - | | | | | |

* Locate on site diagram.
(rev:3/4/92)

ATTACHMENT 4

**CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII**

mry 20/93

| | | | |
|---|---|--|-------------------------------|
| ACTIVITY LEADER(Print) <u>PAUL E. BEATTY</u> | NAME OF SURVEY OR ACTIVITY <u>CERTAINTED</u> | DATE OF COLLECTION <u>19</u> DAY <u>07</u> MONTH <u>93</u> YEAR | SHEET <u>1</u> of <u>1</u> |
|---|---|--|-------------------------------|

CONTENTS OF SHIPMENT

| SAMPLE NUMBER | TYPE OF CONTAINERS | | | | SAMPLED MEDIA | | | | | RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.) | |
|---------------|---|--------|--------|--------|-------------------------|-------|------|----------|------|---|----------------------|
| | <u>CLASS VIAL</u> CONTAINER | BOTTLE | BOTTLE | BOTTLE | VOA SET (2 VIALS EA) | water | soil | sediment | dust | | other |
| | NUMBERS OF CONTAINERS PER SAMPLE NUMBER | | | | | | | | | | |
| SBR23-001 | 1 | | | | | | | | | ✓ | ASBESTOS ANALYSIS |
| SBR23-002 | 1 | | | | | | | | | ✓ | |
| SBR23-003 | 1 | | | | | | | | | ✓ | |
| SBR23-004 | 1 | | | | | | | | | ✓ | |

| | |
|--|---|
| DESCRIPTION OF SHIPMENT <u>1</u> PIECE(S) CONSISTING OF _____ BOX(ES) _____ ICE CHEST(S); OTHER <u>PLASTIC BAG</u> | MODE OF SHIPMENT _____ COMMERCIAL CARRIER: _____ _____ COURIER <input checked="" type="checkbox"/> SAMPLER CONVEYED (SHIPPING DOCUMENT NUMBER) _____ |
|--|---|

PERSONNEL CUSTODY RECORD

| | | | | |
|--|-----------------------|----------------------|--|---|
| RELINQUISHED BY (SAMPLER) <u>Paul E. Beatty</u> | DATE <u>7/2/93</u> | TIME <u>11:15</u> | RECEIVED BY <u>Nicole Robley</u> | REASON FOR CHANGE OF CUSTODY <u>ANALYSIS</u> |
| <input type="checkbox"/> SEALED <input checked="" type="checkbox"/> UNSEALED | | | <input type="checkbox"/> SEALED <input checked="" type="checkbox"/> UNSEALED | |
| RELINQUISHED BY | DATE | TIME | RECEIVED BY | REASON FOR CHANGE OF CUSTODY |
| <input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED | | | <input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED | |
| RELINQUISHED BY | DATE | TIME | RECEIVED BY | REASON FOR CHANGE OF CUSTODY |
| <input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED | | | <input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED | |

ATTACHMENT 5

ANALYSIS REQUEST REPORT

VALIDATED DATA

FOR ACTIVITY: SBR23

BEATTY, P.

08/03/93 10:54:08

ALL SAMPLES

* FINAL REPORT

FY: 93 ACTIVITY: SBR23 DESCRIPTION: CERTAINTIED (ST. LOUIS) LOCATION: ST. LOUIS MISSOURI
 STATUS: ACTIVE TYPE: SAMPLING - IN HOUSE ANALYSIS PROJECT: S02
 LABO DUE DATE IS 8/20/93. REPORT DUE DATE IS 8/26/93.
 INSPECTION DATE: 7/19/93 ALL SAMPLES RECEIVED DATE: 07/21/93
 ALL DATA APPROVED BY LABO DATE: 08/02/93 FINAL REPORT TRANSMITTED DATE: 00/00/00
 EXPECTED LABO TURNAROUND TIME IS 30 DAYS EXPECTED REPORT TURNAROUND TIME IS 38 DAYS
 ACTUAL LABO TURNAROUND TIME IS 12 DAYS ACTUAL REPORT TURNAROUND TIME IS 0 DAYS
 SITE CODE: SITE:

| SAMP. NO. | QCC | M | DESCRIPTION | SAMPLE # STATUS | CITY | STATE | AIRS/ STORET LOC NO | LAY- SECT ER | BEG. DATE | BEG. TIME | END. DATE | END. TIME |
|--------------|-----|---|--------------------------------|--------------------|-----------|----------|---------------------------|-----------------|--------------|--------------|--------------|--------------|
| 001 | | S | BRANCH METALS BUILDING | 1 | ST. LOUIS | MISSOURI | | | 07/19/93 | : | 07/19/93 | : |
| 002 | | S | BRANCH METALS BUILDING | 1 | ST. LOUIS | MISSOURI | | | 07/19/93 | : | 07/19/93 | : |
| 002 | L | S | LAB DUPLICATE | 0 | ST. LOUIS | MISSOURI | | | 07/19/93 | 00:00 | / / | : |
| 003 | | S | BRANCH METALS BUILDING | 1 | ST. LOUIS | MISSOURI | | | 07/19/93 | : | 07/19/93 | : |
| 004 | | S | BRANCH METALS BUILDING | 1 | ST. LOUIS | MISSOURI | | | 07/19/93 | : | 07/19/93 | : |
| 900 | G | S | MEASURED VALUE METHOD STANDARD | 0 | ST. LOUIS | MISSOURI | | | 07/19/93 | 00:00 | / / | : |
| 900 | H | S | TRUE VALUE METHOD STANDARD | 0 | ST. LOUIS | MISSOURI | | | 07/19/93 | 00:00 | / / | : |
| 900 | M | S | MEASURED VALUE LAB BLANK | 0 | ST. LOUIS | MISSOURI | | | 07/19/93 | 00:00 | / / | : |

EXPLANATION OF CODES AND INFORMATION ON ANALYSIS REQUEST DETAIL REPORT

SAMPLE INFORMATION:

SAMP. NO. = SAMPLE IDENTIFICATION NUMBER (A 3-DIGIT NUMBER WHICH IN COMBINATION WITH THE ACTIVITY NUMBER AND QCC, PROVIDES AN UNIQUE NUMBER FOR EACH SAMPLE FOR IDENTIFICATION PURPOSES)

QCC = QUALITY CONTROL CODE (A ONE-LETTER CODE USED TO DESIGNATE SPECIFIC QC SAMPLES. THIS FIELD WILL BE BLANK FOR ALL NON-QC OR ACTUAL SAMPLES):

B = CAL INCREASED CONCENTRATION FOR A LAB SPIKED DUP SAMPLE

D = MEASURED VALUE FOR FIELD DUPLICATE SAMPLE

F = MEASURED VALUE FOR FIELD BLANK

G = MEASURED VALUE FOR METHOD STANDARD

H = TRUE VALUE FOR METHOD STANDARD

K = CAL INCREASED CONCENTRATION FOR FIELD SPIKED DUP SAMPLE

L = MEASURED VALUE FOR A LAB DUPLICATE SAMPLE

M = MEASURED VALUE FOR LAB BLANK

N = MEASURED CONCENTRATION OF FIELD SPIKED DUPLICATE

P = MEASURED VALUE FOR PERFORMANCE STANDARD

R = CAL INCREASED CONCENTRATION RESULTING FROM LAB SPIKE

S = MEASURED CONCENTRATION OF LAB SPIKED SAMPLE

T = TRUE VALUE OF PERFORMANCE STANDARD

W = MEASURED CONCENTRATION OF LAB SPIKED DUPLICATE

Y = MEASURED CONCENTRATION OF FIELD SPIKED SAMPLE

Z = CAL INCREASED CONCENTRATION RESULTING FROM FIELD SPIKE

1 = MEASURED VALUE OF FIRST SPIKED REPLICATE

2 = MEASURED VALUE OF SECOND SPIKED REPLICATE

3 = MEASURED VALUE OF THIRD SPIKED REPLICATE

4 = MEASURED VALUE OF FOURTH SPIKED REPLICATE

5 = MEASURED VALUE OF FIFTH SPIKED REPLICATE

6 = MEASURED VALUE OF SIXTH SPIKED REPLICATE

7 = MEASURED VALUE OF SEVENTH SPIKED REPLICATE

M = MEDIA CODE (A ONE-LETTER CODE DESIGNATING THE MEDIA OF THE SAMPLE):

A = AIR H = HAZARDOUS WASTE/OTHER

S = SOLID (SOIL, SEDIMENT, SLUDGE)

T = TISSUE (PLANT & ANIMAL)

W = WATER (GROUND WATER, SURFACE WATER, WASTE WATER, DRINKING WATER)

DESCRIPTION = A SHORT DESCRIPTION OF THE LOCATION WHERE SAMPLE WAS COLLECTED

AIRS/STORET LOC. NO. = THE SPECIFIC LOCATION ID NUMBER OF EITHER OF THESE NATIONAL DATABASE SYSTEMS, AS APPROPRIATE

DATE/TIME INFORMATION = SPECIFIC INFORMATION REGARDING WHEN THE SAMPLE WAS COLLECTED

BEG. DATE = DATE SAMPLING WAS STARTED

BEG. TIME = TIME SAMPLING WAS STARTED

END DATE = DATE SAMPLING WAS COMPLETED

END TIME = TIME SAMPLING WAS COMPLETED

NOTE: A GRAB SAMPLE WILL CONTAIN ONLY BEG. DATE/TIME

A TIMED COMPOSITE SAMPLE WILL CONTAIN BOTH BEG AND END DATE/TIME TO DESIGNATE DURATION OF SAMPLE COLLECTION

OTHER CODES

V = VALIDATED

ANALYTICAL RESULTS/MEASUREMENTS INFORMATION:

COMPOUND = MGP (MEDIA-GROUP-PARAMETER) CODE AND NAME OF THE MEASURED CONSTITUENT OR CHARACTERISTIC OF EACH SAMPLE

UNITS = SPECIFIC UNITS IN WHICH RESULTS ARE REPORTED:

C = CENTIGRADE (CELSIUS) DEGREES

CFS = CUBIC FEET PER SECOND

GPM = GALLONS PER MINUTE

IN = INCHES

I.D. = SPECIES IDENTIFICATION

KG = KILOGRAM

L = LITER

LB = POUNDS

MG = MILLIGRAMS (1 X 10⁻³ GRAMS)

MGD = MILLION GALLONS PER DAY

MPH = MILES PER HOUR

MV = MILLIVOLT

M/F = MALE/FEMALE

M2 = SQUARE METER

M3 = CUBIC METER

NA = NOT APPLICABLE

NG = NANOGRAMS (1 X 10⁻⁹ GRAMS)

NTU = NEPHELOMETRIC TURBIDITY UNITS

PC/L = PICO (1 X 10⁻¹²) CURRIES PER LITER

PG = PICOGRAMS (1 X 10⁻¹² GRAMS)

P/CM2 = PICOGRAMS PER SQUARE CENTIMETER

SCM = STANDARD CUBIC METER (1 ATM, 25 C)

SQ FT = SQUARE FEET

SU = STANDARD UNITS (PH)

UG = MICROGRAMS (1 X 10⁻⁶ GRAMS)

UMHOS = MICROMHOS/CM (CONDUCTIVITY UNITS)

U/CC2 = MICROGRAMS PER 100 SQUARE CENTIMETERS

U/CM2 = MICROGRAMS PER SQUARE CENTIMETER

1000G = 1000 GALLONS

+/- = POSITIVE/NEGATIVE

= NUMBER

DATA QUALIFIERS = SPECIFIC CODES USED IN CONJUNCTION WITH DATA VALUES TO PROVIDE ADDITIONAL INFORMATION ON THE REPORTED RESULTS, OR USED TO EXPLAIN THE ABSENCE OF A SPECIFIC VALUE:

BLANK = IF FIELD IS BLANK, NO REMARKS OR QUALIFIERS ARE PERTINENT. FOR FINAL REPORTED DATA, THIS MEANS THAT THE VALUES HAVE BEEN REVIEWED AND FOUND TO BE ACCEPTABLE FOR USE.

I = INVALID SAMPLE/DATA - VALUE NOT REPORTED

J = DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES

K = ACTUAL VALUE OF SAMPLE IS < VALUE REPORTED

L = ACTUAL VALUE OF SAMPLE IS > VALUE REPORTED

M = DETECTED BUT BELOW THE LEVEL OF REPORTED VALUE FOR ACCURATE QUANTIFICATION

O = PARAMETER NOT ANALYZED

U = ACTUAL VALUE OF SAMPLE IS < THE MEASUREMENT DETECTION LIMIT (REPORTED VALUE)

ANALYSIS REQUEST DETAIL REPORT

ACTIVITY: 3-SBR23

VALIDATED DATA

| COMPOUND | UNITS | 001 | 002 | 002 L | 003 | 004 |
|--------------------------|-------|-------|-------|-------|-------|-------|
| SB02 CHRYSOTILE, BULK | % | 5 | 30 | 25 | 35 | 0 |
| SB03 AMOSITE, BULK | % | 0 | 0 | 0 | 0 | 0 |
| SB04 CROCIDOLITE, BULK | % | 0 | 0 | 0 | 0 | 0 |
| SB05 TREMOLITE, BULK | % | 0 | 0 | 0 | 0 | 0 |
| SB06 ACTINOLITE, BULK | % | 0 | 0 | 0 | 0 | 0 |
| SB07 ANTHOPHYLLITE, BULK | % | 0 | 0 | 0 | 0 | 0 |
| ZZ01 SAMPLE NUMBER | NA | 001 | 002 | 002 | 003 | 004 |
| ZZ02 ACTIVITY CODE | NA | SBR23 | SBR23 | SBR23 | SBR23 | SBR23 |

ANALYSIS REQUEST DETAIL REPORT

ACTIVITY: 3-SBR23

VALIDATED DATA

| COMPOUND | UNITS | 900 G | 900 H | 900 M | | |
|--------------------------|-------|-------|-------|-------|--|--|
| SB02 CHRYSOTILE, BULK | % | 7 | 10 | 0 | | |
| SB03 AMOSITE, BULK | % | 0 | 0 | 0 | | |
| SB04 CROCIDOLITE, BULK | % | 0 | 0 | 0 | | |
| SB05 TREMOLITE, BULK | % | 0 | 0 | 0 | | |
| SB06 ACTINOLITE, BULK | % | 0 | 0 | 0 | | |
| SB07 ANTHOPHYLLITE, BULK | % | 0 | 0 | 0 | | |
| ZZ01 SAMPLE NUMBER | NA | 900 | 900 | 900 | | |
| ZZ02 ACTIVITY CODE | NA | SBR23 | SBR23 | SBR23 | | |

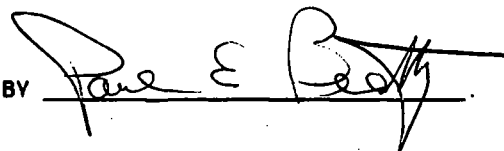
VALIDATED DATA

ACTIVITY SBR23 CERTAINTIED (ST.LOUIS)

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET, AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS ARCHIVE

FINAL DATA REPORT APPROVED BY PROJECT LEADER ON 08/03/93 10:54:08 BY

A handwritten signature in black ink, appearing to read "Paul E. Bost", is written over a horizontal line.

ATTACHMENT 6



1
Photo #1

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PSB

CAPTION: Maline Creek.

Photo taken from Bellfontaine Road looking
easterly.

A vertical stamp is located on the right margin of the document. It consists of several rectangular boxes stacked vertically, with some text and numbers inside them, though they are not clearly legible. The stamp appears to be a filing or tracking mark.



2
Photo #2

CertainTeed, St. Louis, MO

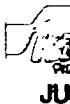
7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PSB

CAPTION: Maline Creek.

Photo taken from south side of creek towards
CertainTeed site.





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Photo #3

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PS

CAPTION: Maline Creek.

Photo taken from south side of creek towards
CertainTeed site.



Photo #4

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Insulation removed from pipe.



5
Photo #5

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Southwest building.
Insulation removed from pipe.



9

Photo #6

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PS

CAPTION: Southwest building. Heater.



L
Photo #7

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PS

CAPTION: Southwest building. Pipe on floor with some
insulation residue.



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D



8

Photo #8

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, 1st floor.

Asbestos contaminated area after abatement.



D



6
Photo #9

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PJB

CAPTION: Northeast building, 1st floor.

Asbestos contaminated area after abatement.



Photo #10

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, 2nd floor.

Asbestos contaminated area after abatement.



71
Photo #11

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty *PB*

CAPTION: Northeast building, 2nd floor.



21
Photo #12

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty

PJB

CAPTION: Northeast building, 3rd floor, southeast wall.



Photo #13

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PSB

CAPTION: Northeast building.

Insulation removed from pipe.



D



61
Photo #14

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty

PSB

CAPTION: Northeast building, southeast area.
Transite debris.



31
Photo #15

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty KB

CAPTION: Northeast building, southeast area.
Transite debris.



91
Photo #16

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PSB

CAPTION: Northeast building, southeast area.

D



21

Photo #17

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Northeast building, southeast area.
Transite debris.

D



81
Photo #18

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PSB

CAPTION: Sample site SBR23-001. Northeast building,
southeast area.
Transite debris.



Photo #19

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty



CAPTION: Sample site SBR23-002. Northeast building,
southeast area.

1
2
3



07
Photo #20

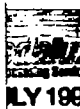
CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Sample site SBR23-003. Northeast building,
southeast area.



D



12
Photo #21

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Sample site SBR23-003. Northeast building,
southeast area.



Photo #22

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PEB

CAPTION: Sample site SBR23-004.

Southwest building, 3rd level.

From top edge of mixing vessel.



Photo #23

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty *PKD*

CAPTION: Sample site SBR23-004.
Southwest building, 3rd level.
Mixing vessel.



52
Photo #24

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PS

CAPTION: Southwest building, 3rd level.



52

Photo #25

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PB

CAPTION: Southwest building, south end.

Friable insulation material on metal post.

1003



Photo #26

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PS

CAPTION: Maline creek from CertainTeed side.



62
Photo #27

CertainTeed, St. Louis, MO

7/19/93

Activity #SBR23

Inspector: Paul E. Beatty PJB

CAPTION: Maline creek from CertainTeed side.